Amendments to the claims:

1. (Currently amended) A cooling apparatus having a cooling structure ~~that comprises~~ comprising:

at least one surface area for introducing heat, and a cooling member that is connected to the cooling structure in a heat-conducting manner, wherein the cooling member is moveable so as to generate an air flow by means of the movement of the cooling member, the air flow supporting heat emission from the cooling member to the environment, wherein the cooling member is fixedly connected to a shaft and the shaft is rotatably supported in the cooling structure,

the cooling structure comprises a container that is filled with a high heat-conducting medium, [[and]]

the shaft extends into the container and is fixedly connected to a rotating member within the container; and

an air guiding device to direct the air flow,

wherein the air guiding device comprises a cover plate that separates an air suction side and an air release side, the cover plate coaxially enclosing the shaft and providing a central aperture to define a flow channel in the vicinity of the shaft.

2. (Previously presented) A cooling apparatus according to claim 1, wherein the cooling member has a plurality of blade-like cooling surfaces that project in a radial direction from the shaft.

3. (Previously presented) A cooling apparatus according to claim 1,

wherein the cooling member has a plurality of vane-like cooling surfaces that project in a radial direction from the shaft.

4. (Previously presented) A cooling apparatus according to claim 1, wherein the shaft is connected to an electric drive unit.

Claims 5-7 (Cancelled).

8. (Previously presented) A cooling apparatus according to claim 1, wherein container is made of a high heat-conducting material, particularly copper or aluminum.

9. (Previously presented) A cooling apparatus according to claim 1, wherein the shaft is supported in the container by roller bearings.

10. (Previously presented) A cooling apparatus according to according to claim 1, wherein the shaft and the rotating member are made of a high heat-conducting material, particularly copper or aluminum, and are connected to each other in a high heat-conducting manner.

11. (Previously presented) A cooling apparatus according to claim 1, wherein the rotating member comprises a disk for generating a flow in the heat-conducting medium.

12. (Cancelled).